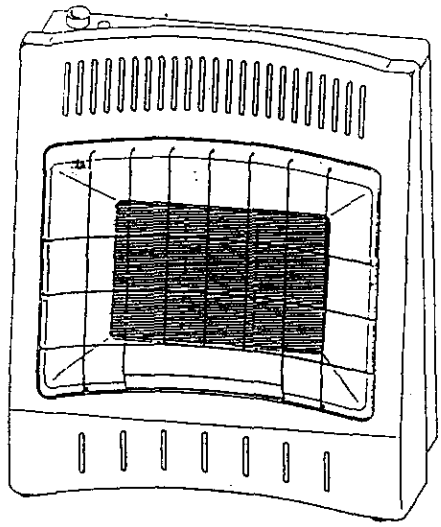
Comfort Glow®

VENT-FREE PROPANE GAS HEATER

OWNER'S OPERATION AND INSTALLATION MANUAL



Models: CGR18PT and CGR30PT

WARNING: If the information in this manual is not followed exactly, a fire or explosion may result causing property damage, personal injury, or loss of life.

— **Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.**

— WHAT TO DO IF YOU SMELL GAS

- **Do not try to light any appliance.**
- **Do not touch any electrical switch; do not use any phone in your building.**
- **Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.**
- **If you cannot reach your gas supplier, call the fire department.**

— **Installation and service must be performed by a qualified installer, service agency, or the gas supplier.**

This is an unvented gas-fired heater. It uses air (oxygen) from the room in which it is installed. Provisions for adequate combustion and ventilation air must be provided.

This appliance may be installed in an aftermarket* manufactured (mobile) home, where not prohibited by state or local codes.

* Aftermarket: Completion of sale, not for purpose of resale, from the manufacturer.

This appliance is only for use with the type of gas indicated on the rating plate. This appliance is not convertible for use with other gases.

Save this manual for future reference.

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SAFETY INFORMATION

⚠ WARNINGS

IMPORTANT: Read this owner's manual carefully and completely before trying to assemble, operate, or service this heater. Improper use of this heater can cause serious injury or death from burns, fire, explosion, electrical shock, and carbon monoxide poisoning.

⚠ DANGER

Carbon monoxide poisoning may lead to death!

Carbon Monoxide Poisoning: Early signs of carbon monoxide poisoning resemble the flu, with headaches, dizziness, or nausea. If you have these signs, the heater may not be working properly. Get fresh air at once! Have heater serviced. Some people are more affected by carbon monoxide than others. These include pregnant women, persons with heart or lung disease or anemia, those under the influence of alcohol, and those at high altitudes.

Propane/LP Gas: Propane/LP gas is odorless. An odor-making agent is added to propane/LP gas. The odor helps you detect a propane/LP gas leak. However, the odor added to propane/LP gas can fade. Propane/LP gas may be present even though no odor exists.

Make certain you read and understand all warnings. Keep this manual for reference. It is your guide to safe and proper operation of this heater.

Safety Information Continues on next page

SAFETY INFORMATION *Continued*

⚠ WARNINGS *Continued*

WARNING: Any change to this heater or its controls can be dangerous.

1. Use only propane/LP gas. Do not convert heater to use different fuel type.
2. Do not place propane supply tank(s) inside any structure. Locate propane/LP supply tank(s) outdoors.
3. This heater shall not be installed in a bedroom or bathroom.
4. If you smell gas
   - Shut off gas supply
   - Do not try to light any appliance
   - Do not touch any electrical switch; do not use any phone in your building
   - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions
   - If you cannot reach your gas supplier, call the fire department
5. Never install the heater
   - in a recreational vehicle
   - where curtains, furniture, clothing, or other flammable objects are less than 36 inches from the front, top, or sides of the heater
   - as a fireplace insert
   - in high traffic areas
   - in windy or drafty areas
6. This heater needs fresh, outside air ventilation to run properly. This heater has an oxygen depletion sensor (ODS) pilot light safety system. The ODS shuts down the heater if not enough fresh air is available. See *Air for Combustion and Ventilation*, pages 5 through 8.
7. If heater shuts off, do not relight until you provide fresh, outside air. If heater keeps shutting off, have it serviced.
8. Do not run heater
   - where flammable liquids or vapors are used or stored
   - under dusty conditions
9. Never place any objects on the heater.
10. Surface of heater becomes very hot when running heater. Keep children and adults away from hot surface to avoid burns or clothing ignition. Heater will remain hot for a time after shut-down. Allow surface to cool before touching.
11. Carefully supervise young children when they are in same room with heater.
12. Make sure grill guard is in place before running heater.
13. Do not use heater if any part has been under water. Immediately call a qualified service technician to inspect the room heater and to replace any part of the control system and any gas control which has been under water.
14. Turn off heater and let cool before servicing. Only a qualified service person should service and repair heater.
15. Operating heater above elevations of 4,500 feet may cause pilot outage.

PRODUCT IDENTIFICATION

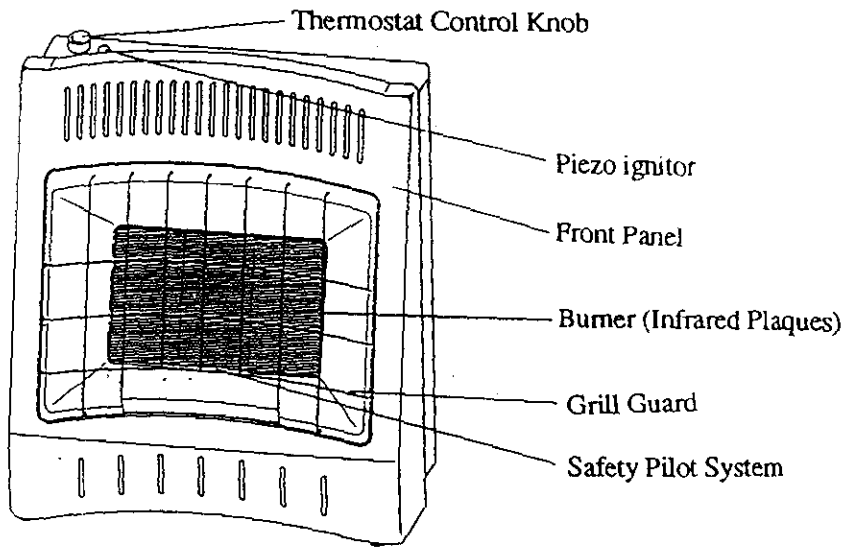


Figure 1- Vent-Free Propane/LP Gas Thermostatic Heater

LOCAL CODES

Install and use heater with care. Follow all local codes. In the absence of local codes, use the latest edition of National Fuel Gas Code ANSI Z223.1, also known as NFPA 54*.

*Available from:

American National Standards Institute, Inc.
1430 Broadway
New York, NY 10018

National Fire Protection Association, Inc.
Batterymarch Park
Quincy, MA 02269

UNPACKING

1. Remove heater from carton.
2. Remove all protective packaging applied to heater for shipment.
3. Check heater for any shipping damage. If heater is damaged, promptly inform dealer where you bought heater.

PRODUCT FEATURES

Safety Device

This heater has a pilot with an Oxygen Depletion Sensor Shutoff System (ODS). The ODS/pilot is a required feature for vent-free room heaters. The ODS/pilot shuts off the heater if there is not enough fresh air.

Piezo Ignition System

This heater has a piezo ignitor. This system requires no matches, batteries, or other sources to light heater.

Thermostatic Heat Control

This heater has a thermostat sensing bulb and thermostat control. This results in the greatest heater comfort. This can also result in lower gas bills.

AIR FOR COMBUSTION AND VENTILATION

⚠ WARNING

This heater must have fresh air for proper operation. If not, poor fuel combustion could result. Read the following instructions to insure proper fresh air for this and other fuel-burning appliances in your home.

Today's homes are built more energy efficient than ever. New materials, increased insulation, and new construction methods help reduce heat loss in homes. Home owners weather strip and caulk around windows and doors to keep the cold air out and the warm air in. During heating months, home owners want their homes as airtight as possible.

While it is good to make your home energy efficient, your home needs to breathe. Fresh air must enter your home. All fuel-burning appliances need fresh air for proper combustion and ventilation.

Exhaust fans, fireplaces, clothes dryers, and fuel burning appliances draw air from the house to operate. You must provide adequate fresh air for these appliances. This will insure proper venting of vented fuel-burning appliances.

PROVIDING ADEQUATE VENTILATION

The following is exerpted from National Fuel Gas Code, NFPA 54/ANSI Z223.1, Section 5.3, "Air for Combustion and Ventilation".

All spaces in homes fall into one of the three following ventilation classifications: 1. Unusually Tight Contruction; 2. Unconfined Space; 3. Confined Space. The information on pages 5 through 8 will help you classify your space and provide adequate ventilation.

Unusually Tight Construction

The air that leaks around doors and windows may provide enough fresh air for combustion and ventilation. However, in buildings of unusually tight construction, you must provide additional fresh air.

Unusually tight construction is defined as construction where:

a. **walls and ceilings exposed to the outside atmosphere have a continuous water vapor retarder with a rating of one perm or less with openings gasketed or sealed *and***
b. **weather stripping has been added on openable windows and doors *and***
c. **caulking or sealants are applied to areas such as joints around window and door frames, between sole plates and floors, between wall-ceiling joints, between wall panels, at penetrations for plumbing, electrical, and gas lines, and at other openings.**

If your home meets all of the three criteria above, you must provide additional fresh air. See *Ventilation Air From Outdoors*, page 8. If your home does not meet all of the three criteria above, continue reading.

Confined Space and Unconfined Space

This heater shall not be installed in a confined space unless provisions are provided for adequate combustion and ventilation air.

The National Fuel Gas Code defines a confined space as a space whose volume is less than 50 cubic feet per 1,000 Btu per hour (4.8 m^3 per kw) of the aggregate input rating

Continued

AIR FOR COMBUSTION AND VENTILATION

Continued

⚠ WARNING

If the area in which the heater may be operated is smaller than that defined as an unconfined space, provide adequate combustion and ventilation air by one of the methods described in the *National Fuel Gas Code, ANSI Z223.1, 1992 Section 5.3*

VENTILATION AIR

Ventilation Air From Inside Building

This fresh air would come from an adjoining unconfined space. When ventilating to an adjoining unconfined space, you must provide two permanent openings: one within 12" of the ceiling and one within 12" of the floor on the wall connecting the two spaces (see options 1 and 2, Figure 2). You can also remove door into adjoining room (see option 3, Figure 2).

Follow the National Fuel Gas Code, NFPA 54/ANSI Z223.1, Section 5.3, "Air for Combustion and Ventilation" for required size of ventilation grills or ducts.

⚠ WARNING

Rework worksheet, adding the space of the adjoining unconfined space. The combined spaces must have enough fresh air to supply all appliances in both spaces.

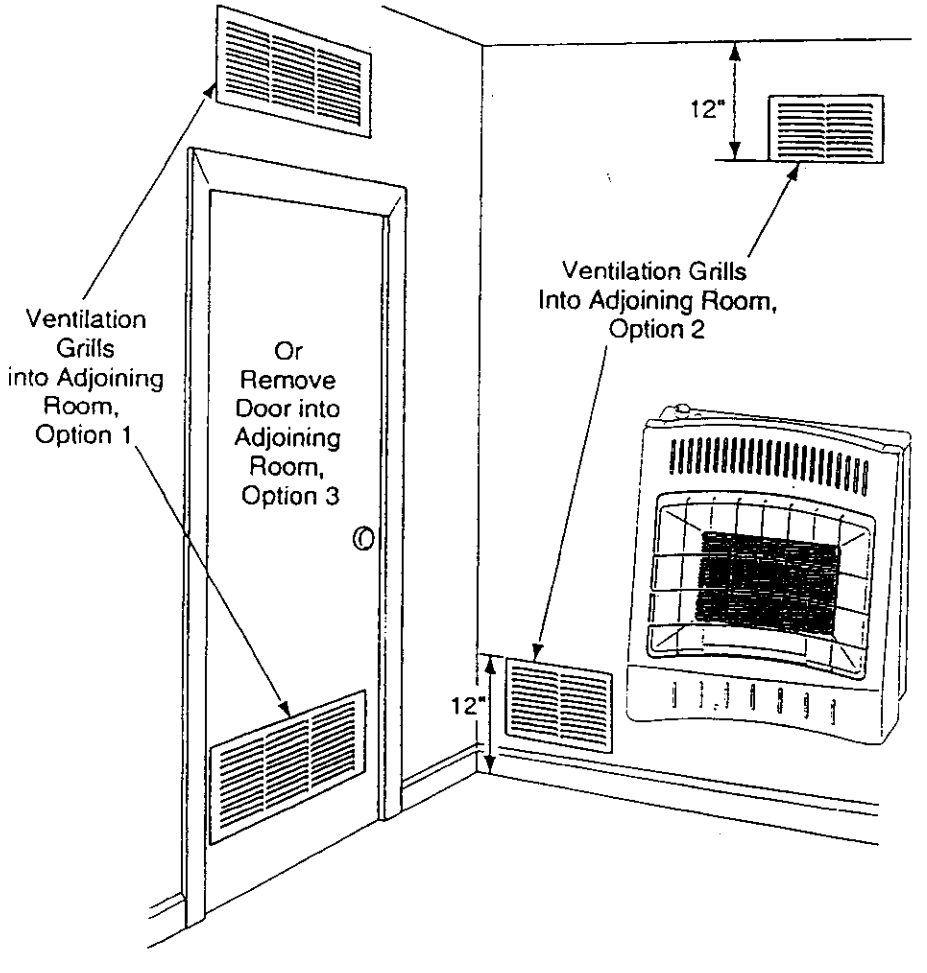

12"
Ventilation Grills Into Adjoining Room, Option 2
Ventilation Grills into Adjoining Room, Option 1
Or Remove Door into Adjoining Room, Option 3
12"

Figure 2 - Ventilation Air from Inside Building

Continued

AIR FOR COMBUSTION AND VENTILATION

Continued

VENTILATION AIR *(Continued)*

Ventilation Air From Outdoors

Provide extra fresh air by using ventilation grills or ducts. You must provide two permanent openings: one within 12" of the ceiling and one within 12" of the floor. Connect these items directly to the outdoors or spaces open to the outdoors. These spaces include attics and crawl spaces. Follow the *National Fuel Gas Code NFPA 54/ANSI Z223.1, 1.992 Section 5.3, Air for Combustion and Ventilation* for required size of ventilation grills or ducts.

IMPORTANT: Do not provide openings for inlet or outlet air into attic if attic has a thermostat-controlled power vent. Heated air entering the attic will activate the power vent.

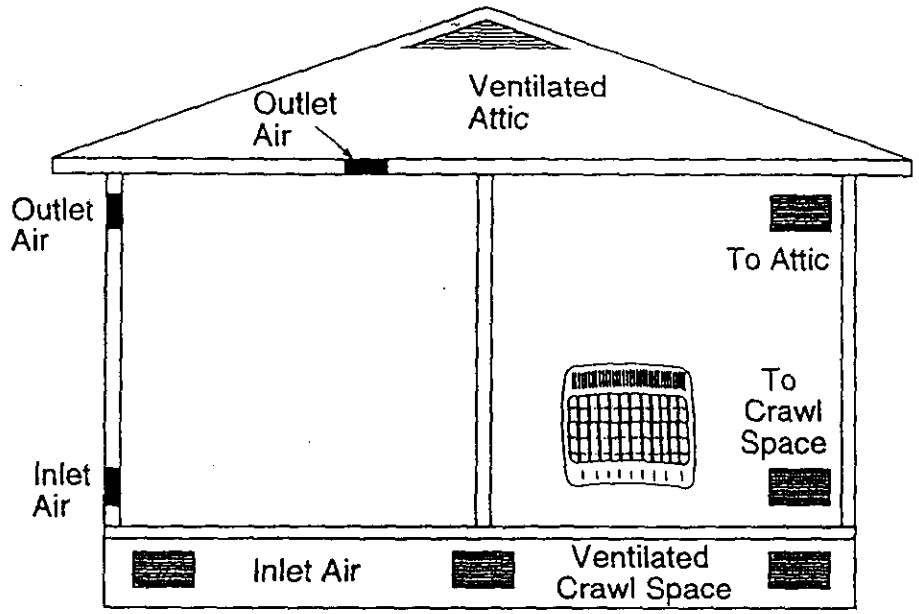


Figure 3 - Ventilation Air from Outdoors

INSTALLING TO WALL

NOTICE

A qualified service person must install heater. Follow all local codes.

CHECK GAS TYPE

Use only propane/LP gas. If your gas supply is not propane/LP, do not install heater. Call dealer where you bought heater for proper type heater.

INSTALLATION ITEMS

Before installing heater, make sure you have the items listed below.

- external regulator (supplied by installer, see page 13)
- piping (check local codes)
- sealant (resistant to propane gas)
- manual shutoff valve *
- ground joint union
- test gauge connection * (see page 14)
- sediment trap
- tee joint
- pipe wrench

* An AGA design certified manual shutoff valve with 1/8" NPT tap is an acceptable alternative to test gauge connection. Purchase the optional AGA design certified manual shutoff valve from your dealer. See *Accessory*, page 24.

LOCATING HEATER

⚠ WARNING

Maintain the minimum clearances shown in Figure 4 (page 10). If you can, provide greater clearances from floor, ceiling, and joining wall.

⚠ WARNING

Never install the heater

- **in a bedroom or bathroom**
- **in a recreational vehicle**
- **where curtains, furniture, clothing, or other flammable objects are less than 36 inches from the front, top, or sides of the heater**
- **as a fireplace insert**
- **in high traffic areas**
- **in windy or drafty areas**

⚠ CAUTION

If you install the heater in a home garage

- **heater pilot and burner must be at least 18 inches above floor**
- **locate heater where moving vehicle will not hit it**

⚠ CAUTION

This heater creates warm air currents. These currents move heat to wall surfaces next to heater. Installing heater next to vinyl or cloth wall coverings or operating heater where impurities in the air (such as tobacco smoke) exist, may discolor walls.

IMPORTANT: Vent-free heaters add moisture to the air. Although this is beneficial, installing heater in rooms without enough ventilation air may cause mildew to form from too much moisture. See *Air for Combustion and Ventilation*, pages 5 through 8.

Continued

INSTALLING TO WALL

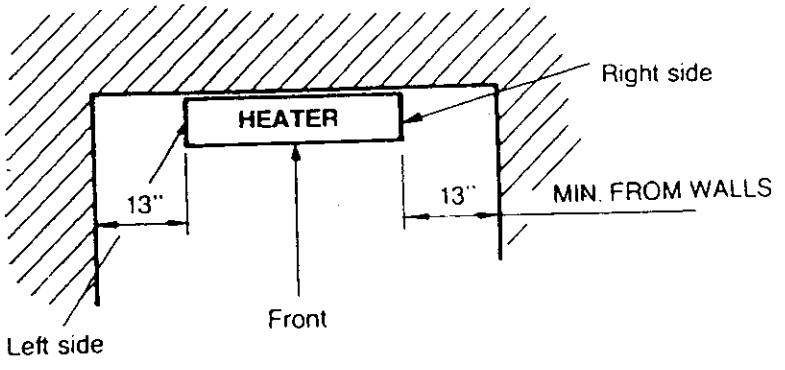
Continued

CLEARANCES

Provide adequate clearance around air openings.
Provide for an adequate combustion and ventilation air supply.
Accessibility provisions must be provided for servicing.

WALL MOUNT

The heater must be installed no less than 2" above the top surface of carpeting, tile, or other floor covering. When facing the front of the heater, clearance from combustibles must be a minimum of 13" from the left, 13" from the right, 36" from the top, and 2" from the bottom. The opening for combustion air located at the bottom of the heater must not be obstructed. It must be free of obstacles.



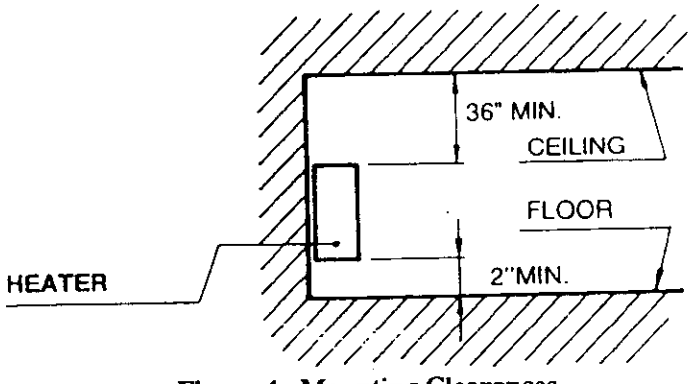


Figure 4 - Mounting Clearances

For convenience and efficiency, install heater

- where there is easy access for operation, inspection, and service
- in coldest part of room

THERMOSTAT SENSING BULB

The thermostat sensing bulb has already been placed at the bottom back of the heater. It is not necessary to change its location for proper operation.

INSTALLING TO WALL

Continued

⚠ WARNING

Maintain minimum clearances shown in Figure 4. If you can, provide greater clearances from floor and joining wall.

INSTALLING HEATER TO A WALL

1. Drill two 5/16" holes according to the dimension L shown in figure 5. Insert two plastic wall anchors into holes. Tighten mounting screws into anchors. Leave 1/8" space between screw head and anchor.
2. Hang the heater on the two mounting screws. Insert "U" hook into bottom of cabinet. Mark anchor location through screw hole in "U" hook.
3. Remove heater from wall. Drill another 5/16" hole at marked location. Insert last plastic wall anchor into hole.
4. Hang heater on wall and place "U" hook in place. Insert mounting screw through "U" hook and into wall anchor. Tighten screw firmly.
5. Connect gas line to heater.

Note: All the screws, anchors and hook are furnished with the unit.

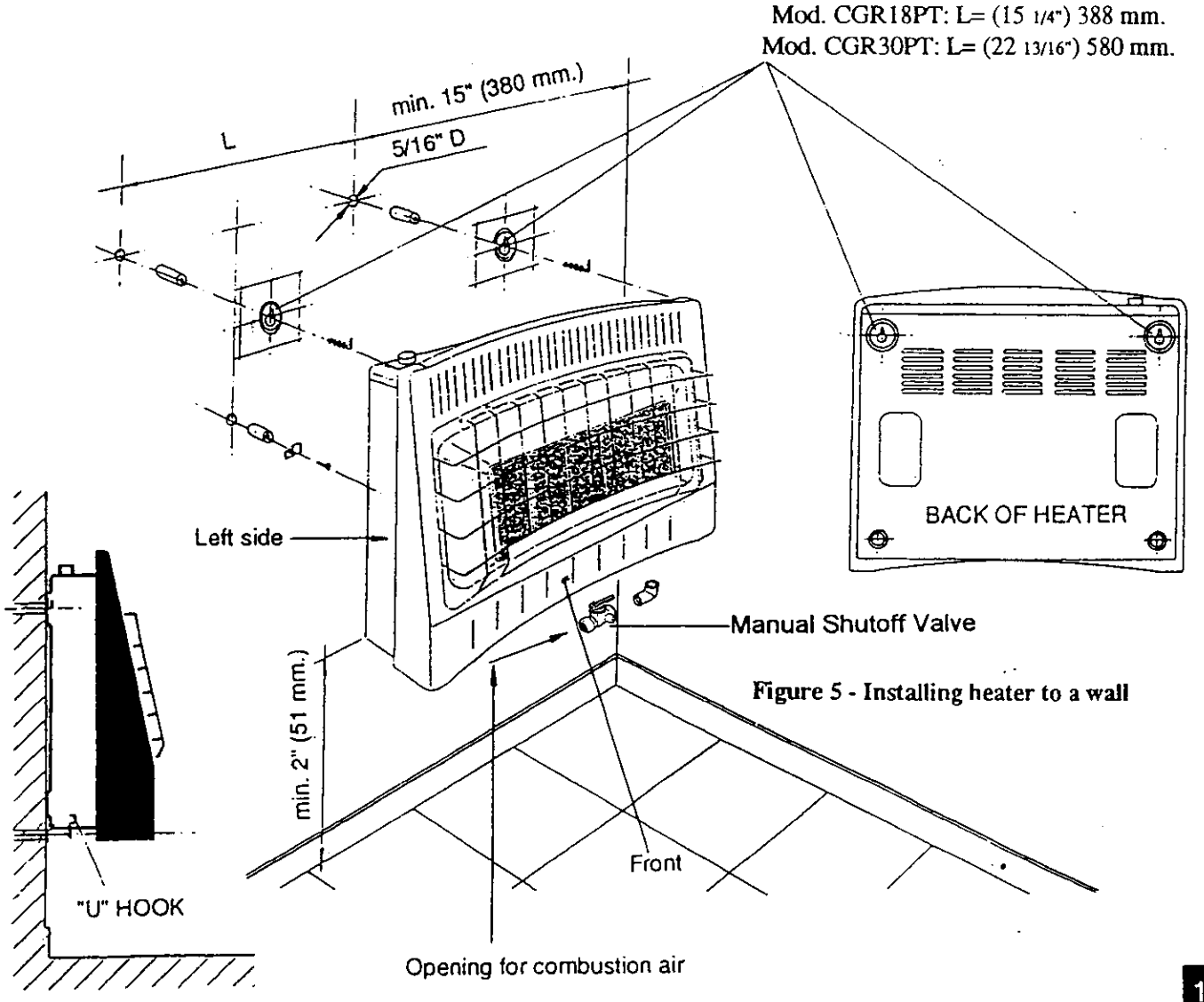


Figure 5 - Installing heater to a wall

INSTALLING ONTO THE FLOOR

INSTALLING HEATER ONTO THE FLOOR

The heater includes plastic legs for its direct installation onto the floor. To assure a stability of the heater, the mounting screws described in previous page can be used to avoid side movements.

As shown in Figure 6, the gas can be placed between the heater and the floor.

If this appliance is installed directly on carpeting, light-colored tile or other combustible material, other than wood flooring, the appliance shall be installed on a metal or a wood panel extending the full width and depth of the appliance. This protective panel is not required as a fire-proof base. The protection is for rugs that are extremely thick and light-colored tile which may discolor.

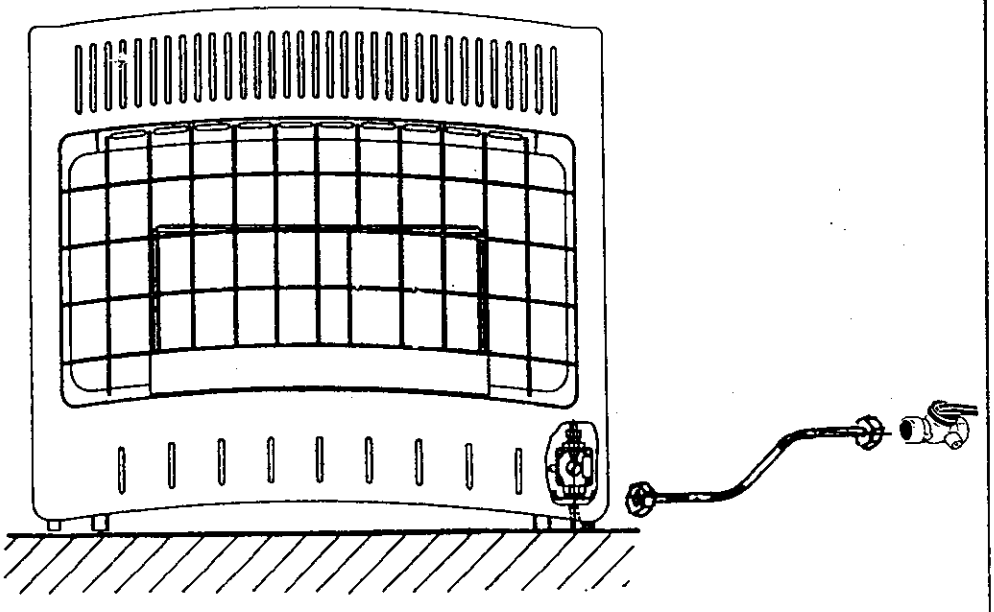
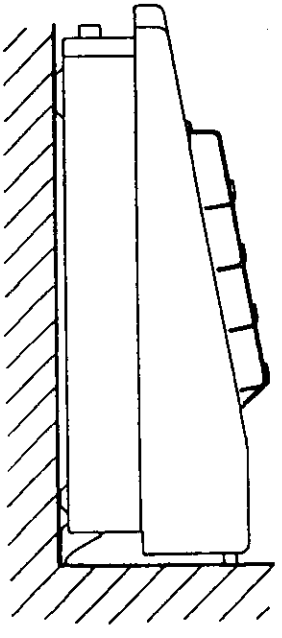


FIGURE 6 - Heater directly rested on the floor.



CONNECTING TO GAS SUPPLY

NOTICE

A qualified service person must connect heater to gas supply. Follow all local codes.

⚠ CAUTION

Never connect heater directly to the propane/LP supply. This heater requires an external regulator (not supplied). Install the external regulator between the heater and propane supply.

The installer must supply an external regulator. The external regulator will reduce incoming gas pressure. You must reduce incoming gas pressure to between 11 and 14 inches of water. If you do not reduce incoming gas pressure, heater regulator damage could occur. Install external regulator with the vent pointing down as shown in Figure 7. Pointing the vent down protects it from freezing rain or sleet.

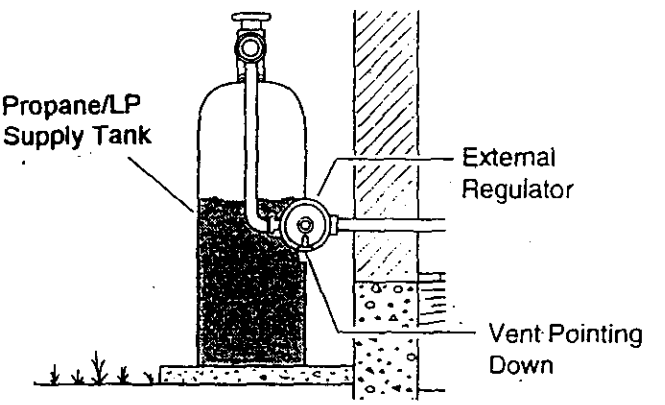


Figure 7 - External Regulator With Vent Pointing Down

⚠ CAUTION

Use only new, black iron or steel pipe. Internally-tinned copper tubing may be used in certain areas. Check your local codes. Use pipe of large enough diameter to allow proper gas volume to heater. If pipe is too small, undue loss of pressure will occur.

Typical Pipe Diameters

CGR18PT: 3/8" or greater

CGR30PT: 1/2" or greater

Installation must include a manual shutoff valve, union, and plugged 1/8" NPT tap. Locate NPT tap within reach for test gauge hook up. NPT tap must be upstream from heater (see Gas Connection, page 14).

Apply pipe joint sealant lightly to male threads. This will prevent excess sealant from going into pipe. Excess sealant in pipe could result in clogged heater valves.

⚠ CAUTION

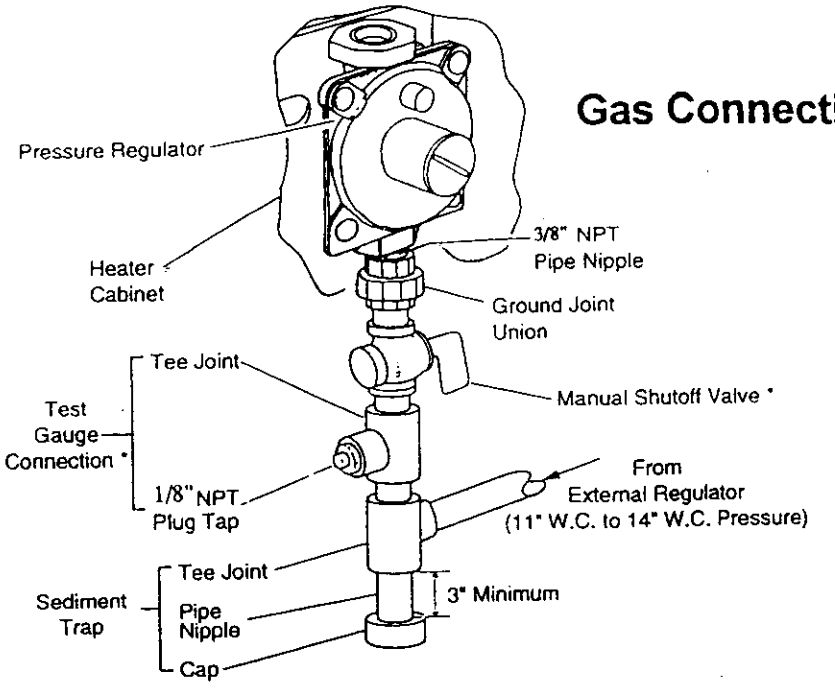
Use pipe joint sealant that is resistant to liquid petroleum (LP) gas.

Install sediment trap in supply line as shown in Gas Connection, page 14. Locate sediment trap where it is within reach for cleaning. Locate sediment trap where trapped matter is not likely to freeze. A sediment trap traps moisture and contaminants. This keeps them from going into heater controls. If sediment trap is not installed or is installed wrong, heater may not run properly.

CONNECTING TO GAS SUPPLY
Continued

IMPORTANT: Hold pressure regulator with wrench when connecting it to gas piping and/or fittings.

Gas Connection



* An AGA design certified manual shutoff valve with 1/8" NPT tap is an acceptable alternative to test gauge connection. Purchase the optional AGA design certified manual shutoff valve from your dealer. See *Accessory*, page 24.

Note: When installing heater onto the floor, a male inlet elbow and a short nut will substitute for the ground joint union so that the manual shutoff valve and the sediment trap can be installed upstream without interfering with floor.

CHECKING GAS CONNECTIONS

⚠ WARNING

Test all gas piping and connections for leaks after installing or servicing. Correct all leaks at once.

⚠ WARNING

Never use an open flame to check for a leak. Apply a mixture of liquid soap and water to all joints. Bubbles forming show a leak. Correct all leaks at once.

⚠ CAUTION

Make sure external regulator has been installed between propane/LP supply and heater. See guidelines under *Connecting to Gas Supply*, page 13.

PRESSURE TESTING GAS SUPPLY PIPING SYSTEM

Test Pressures In Excess Of 1/2 PSIG

1. Disconnect heater and its individual manual shutoff valve from gas supply piping system. Pressures in excess of 1/2 PSIG will damage heater regulator.
2. Cap off open end of gas pipe where manual shutoff valve was connected.

CHECKING GAS CONNECTIONS

Continued

3. Pressurize supply piping system by either using compressed air or opening propane/LP supply tank valve.
4. Check all joints of gas supply piping system. Apply mixture of liquid soap and water to gas joints. Bubbles forming show a leak.
5. Correct all leaks at once.

Test Pressures Equal To or Less Than 1/2 PSIG

1. Close manual shutoff valve (see Figure 8).
2. Pressurize supply piping system by either using compressed air or opening propane/LP supply tank valve.
3. Check all joints from propane supply tank to manual shutoff valve (see Figure 9). Apply mixture of liquid soap and water to gas joints. Bubbles forming show a leak.
4. Correct all leaks at once.

PRESSURE TESTING HEATER GAS CONNECTIONS

1. Open manual shutoff valve (see Figure 8).
2. Open propane supply tank valve.
3. Make sure control knob of heater is in the OFF position.
4. Check all joints from manual shutoff valve to control valve (see Figure 9). Apply mixture of liquid soap and water to gas joints. Bubbles forming show a leak.
5. Correct all leaks at once.
6. Light heater (see *Operating Heater*, page 16). Check the rest of the internal joints for leaks.
7. Turn off heater (see *To Turn Off Gas to Appliance*, page 18)

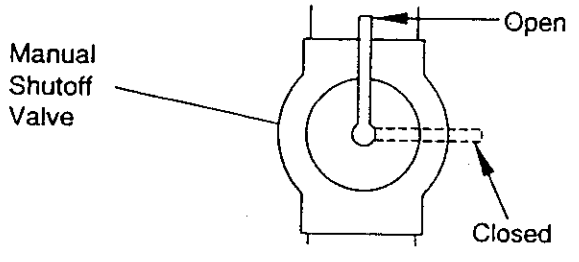


Figure 8 - Manual Shutoff Valve

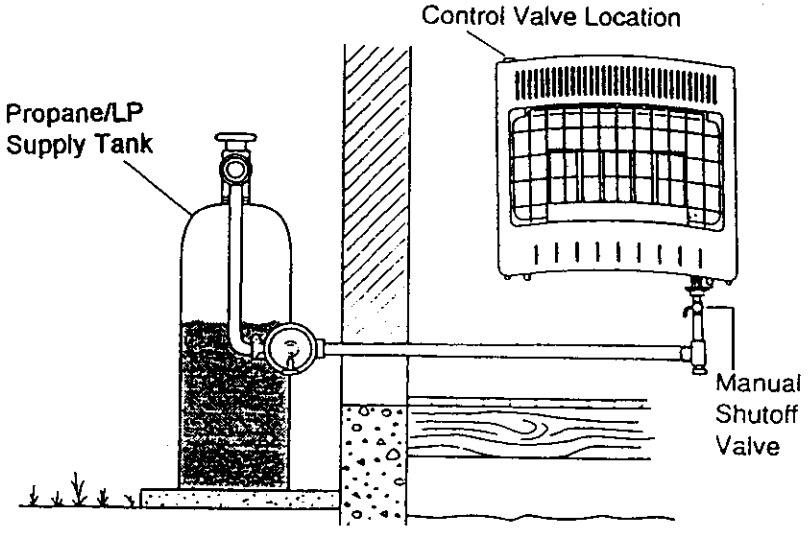


Figure 9 - Checking Gas Joints

OPERATING HEATER AND LIGHTING INSTRUCTIONS

FOR YOUR SAFETY READ BEFORE LIGHTING

⚠ WARNING

If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

A. This appliance has a pilot which must be lighted by hand. When lighting the pilot, follow these instructions exactly.

B. BEFORE LIGHTING smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.

WHAT TO DO IF YOU SMELL GAS

- Do not try to light any appliance.
- Do not touch any electric switch; do not use any phone in your building.
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.

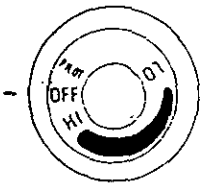
C. Use only your hand to push in or turn the gas control knob. Never use tools. If the knob will not push in or turn by hand, don't try to repair it, call a qualified service technician or gas supplier. Force or attempted repair may result in a fire or explosion.

D. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

LIGHTING INSTRUCTIONS

1. **STOP! Read the safety information above.**
2. **Make sure manual shutoff valve is fully open.**
3. **Turn thermostat control knob clockwise ( ) to the "OFF" position.**

GAS CONTROL KNOB SHOWN IN "OFF" POSITION



4. **Wait ten (10) minutes to clear any gas. Then smell for gas, including near the floor. If you smell gas, STOP! Follow "B" in the safety information above. If you don't smell gas, go to the next step.**
5. **Find pilot attached to the main burner which is located at bottom of combustion chamber.**
6. **Turn knob on gas control counterclockwise ( ) to "Pilot" position.**

OPERATING HEATER AND LIGHTING INSTRUCTIONS

Continued

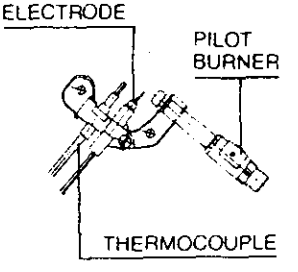
7. Depress and hold down the thermostat control knob.

   While holding the control knob down, push the piezo ignitor button repeatedly to light the pilot. Continue to hold the control knob in for about 30 seconds after the pilot is lit. Release knob and it will pop back up. Pilot should remain lit. If it goes out, repeat steps 3 through 7.

   - If knob does not pop up when released, stop and immediately call your service technician or gas supplier.
   - If the pilot will not stay lit after several tries, turn the gas control knob to the "OFF" position and call your service technician or gas supplier.

8. Attention! Gas control has an INTERLOCK device. When the pilot is initially lit and the safety magnet is energized (pilot stays "ON") the INTERLOCK device becomes operative. If the gas control is turned to the "OFF" position or gas flow to the appliance is shut off, the pilot cannot be relighted until the safety magnet is de-energized (approximately 60 seconds). There will be an audible "click" when the safety magnet in the gas control is de-energized. Pilot can now be relighted. Repeat steps 3 through 7.

9. Turn gas control Knob counterclockwise ( ) to the desired heating level from "LO" to "HI".



THERMOSTAT OPERATION

When the hydraulic thermostat bulb "senses" the need for heat, the unit cycles "ON" at a full input rate. The unit remains at this full input rate until the hydraulic thermostat bulb is "satisfied". When this happens, the burner will shut off with the pilot flame remaining lit.

Note: The burner modulates between "ON" and the pilot flame. When the CGR18PT is "ON" all three ceramic plaques will "glow". There will never be a time when only one or two ceramic plaques are "glowing".

The "LO" and "HI" setting has temperature range of approximately 55° F to 90° F, respectively. This is the temperature at the hydraulic thermostat bulb, not the room temperature. The owner is advised to determine the particular heat setting that is desired for comfort, as heating requirements are different for every owner.

Attention: If no heat is desired, turn the gas control knob to the "Pilot" position (not to the "LO" position).

OPERATING HEATER AND LIGHTING INSTRUCTIONS *Continued*

TO TURN OFF GAS TO APPLIANCE

SHUTTING OFF HEATER

1. Turn thermostat control knob clockwise (↻) to the "OFF" position.

SHUTTING OFF BURNER ONLY (Pilot stays lit)

1. Turn thermostat control knob clockwise (↻) to the "Pilot" position.

MANUAL LIGHTING PROCEDURE

1. **Follow steps 1 through 6 under *Lighting Instructions*.**
2. **With control knob pressed in, strike match. Hold match to pilot until pilot lights.**
3. **Keep control knob pressed in for 30 seconds after lighting pilot. After 30 seconds, release control knob.**

INSPECTING BURNER

Check pilot flame pattern and burner flame pattern often.

PILOT FLAME PATTERN

Figure 10 shows a correct pilot flame pattern. Figure 11 shows an incorrect pilot flame pattern. The incorrect pilot flame is not touching the thermocouple. This will cause the thermocouple to cool. When the thermocouple cools, the heater will shut down.

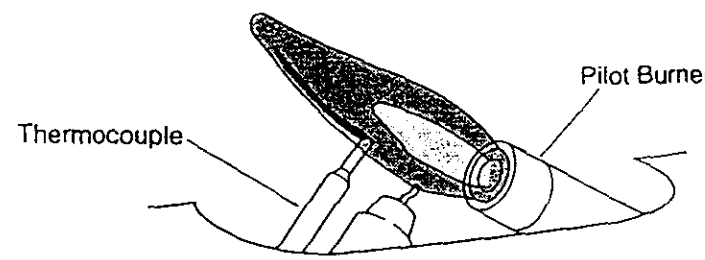


Figure 10 - Correct Pilot Flame Pattern

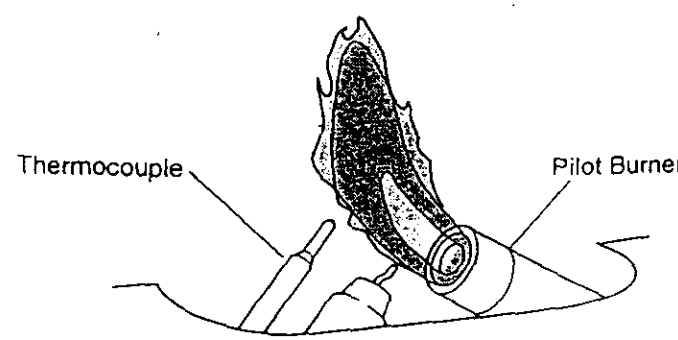


Figure 11 - Incorrect Pilot Flame Pattern

If pilot flame pattern is incorrect, as shown in Figure 11

- turn heater off (see *To TurnOff Gas to Appliance*)
- see *Troubleshooting*, page 20

INSPECTING BURNER
Continued

BURNER FLAME PATTERN

Figure 12 shows a correct burner flame pattern. Figure 13 shows an incorrect burner flame pattern.

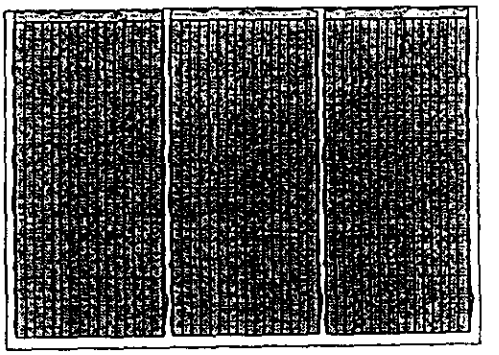


Figure 12 - Correct Burner Flame Pattern

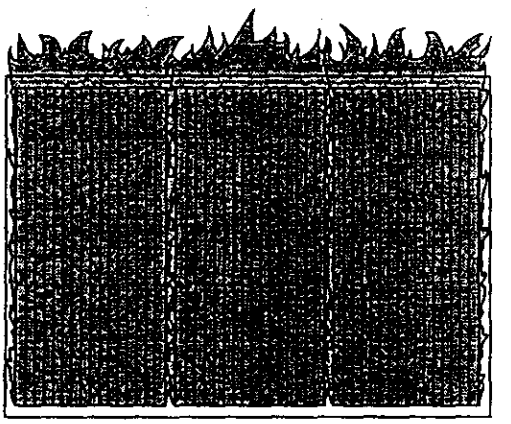


Figure 13 - Incorrect Burner Flame Pattern

If burner flame pattern is incorrect, as shown in Figure 13

- turn heater off (see *To Turn Off Gas to Appliance*, page 18)
- see *Troubleshooting*, page 20

SERVICE HINTS

When gas pressure is too low

- pilot will not stay lit
- burner(s) will have delayed ignition
- heater will not produce specified heat
- propane/LP gas supply may be low

When gas quality is bad

- pilot will not stay lit
- burner(s) will produce flames and soot
- heater will backfire when lit

You may feel your gas pressure is too low or gas quality is bad. If so, contact your local propane/LP gas supplier.

CLEANING AND MAINTENANCE

⚠ WARNING

Turn off heater and let cool before cleaning.

⚠ CAUTION

You must keep control areas, burner, and circulating air passageways of heater clean. Inspect these areas of heater before each use. Have heater inspected yearly by a qualified service person. Heater may need more frequent cleaning due to excessive lint from carpeting, bedding material, etc.

ODS/PILOT AND BURNER ORIFICE

- Use a vacuum cleaner, pressurized air, or small, soft bristled brush to clean.

CABINET

Air Passageways

- Use a vacuum cleaner or pressurized air to clean.

Exterior

- Use a soft cloth dampened with a mild soap and water mixture. Wipe the cabinet to remove dust.

TROUBLE-SHOOTING

Note: All troubleshooting items are listed in order of operation.

⚠ WARNING

Turn off heater and let cool before servicing. Only a qualified service person should service and repair heater.

⚠ CAUTION

Never use a wire, needle, or similar object to clean ODS/pilot. This can damage ODS/pilot unit.

OBSERVED PROBLEM	POSSIBLE CAUSE	REMEDY
When ignitor button is pressed in, there is no spark at ODS/pilot.	1. Ignitor electrode positioned wrong.	1. Replace ignitor.
	2. Ignitor electrode broken.	2. Replace ignitor.
	3. Ignitor electrode not connected to ignitor cable.	3. Reconnect ignitor cable.
	4. Ignitor cable pinched or wet.	4. Free ignitor cable if pinched by any metal or tubing. Keep ignitor cable dry.
	5. Broken ignitor cable.	5. Replace ignitor cable.
	6. Bad piezo ignitor.	6. Replace control valve (piezo is part of control valve).
	7. Piezo ignitor nut is loose.	7. Tighten nut holding piezo ignitor. Nut is located inside heater cabinet at top.

TROUBLE-SHOOTING
Continued

OBSERVED PROBLEM	POSSIBLE CAUSE	REMEDY
When ignitor button is pressed in, there is a spark at ODS/Pilot but no ignition.	1. Gas supply turned off or manual shutoff valve closed.	1. Turn on gas supply or open manual shutoff valve.
	2. Thermostat control knob not pressed in.	2. Press in thermostat control knob while turning to PILOT/IGN position.
	3. Air in gas lines when installed.	3. Continue holding down control knob. Repeat igniting operation until air is removed.
	4. Depleted gas supply	4. Contact local propane/LP gas company.
	5. ODS/pilot is clogged.	5. Clean ODS/pilot (see *Cleaning and Maintenance*, page 20) or replace ODS/pilot assembly.
	6. Gas regulator setting is not correct.	6. Replace gas regulator.
	7. Thermostat control knob is not in pilot position.	7. Turn thermostat control knob to pilot position.
ODS/pilot lights but flame goes out when control knob is released.	1. Control knob not fully pressed in.	1. Press in control knob fully.
	2. Control knob not pressed in long enough.	2. After ODS/pilot lights, keep control knob pressed in 30 seconds.
	3. Manual shutoff valve not fully open.	3. Fully open manual shut-off valve.
	4. Thermocouple connection loose at control valve.	4. Hand tighten until snug, then tighten 1/4 turn more.
	5. Pilot flame not touching thermocouple, which allows thermocouple to cool, causing pilot flame to go out. This problem could be caused by one or both of the following: A) Low gas pressure B) Dirty or partially clogged ODS/pilot	5. A) Contact local propane/LP gas company. B) Clean ODS/pilot (see *Cleaning and Maintenance*, page 20) or replace ODS/pilot assembly.
	6. Thermocouple damaged.	6. Replace thermocouple.
	7. Control valve damaged.	7. Replace control valve.
	8. Safety interlock system has been triggered.	8. Wait one minute for safety interlock system to reset. Repeat ignition operation.

Continued

TROUBLE-SHOOTING

Continued

OBSERVED PROBLEM	POSSIBLE CAUSE	REMEDY
Burner(s) does not light after ODS/pilot is lit.	1. Burner orifice(s) is clogged.	1. Clean burner orifice(s) (see *Cleaning and Maintenance*, page 20) or replace burner orifice(s).
	2. Burner orifice(s) diameter is too small.	2. Replace burner orifice(s).
	3. Inlet gas pressure is too low.	3. Contact local propane/LP gas company.
Delayed ignition of burner(s)	1. Manifold pressure is too low.	1. Contact local propane/LP gas company.
	2. Burner orifice(s) is clogged.	2. Clean burner orifice(s) (see *Cleaning and Maintenance*, page 20 or replace burner orifice(s).
Burner backfiring during combustion.	1. Burner orifice(s) is clogged or damaged.	1. Clean burner orifice(s) (see *Cleaning and Maintenance*, page 20) or replace burner orifice(s).
	2. Burner damaged.	2. Replace burner.
	3. Gas regulator defective.	3. Replace gas regulator.
Burner plaque(s) does not glow.	1. Plaque damaged.	1. Replace burner.
	2. Inlet gas pressure is too low.	2. Contact local propane/LP gas company.
	3. Control knob set between locked positions.	3. Turn control knob until it locks at desired setting.
Slight smoke or odor during initial operation	1. Residues from manufacturing processes	1. Problem will stop after a few hours of operation.
Heater produces a clicking/ticking noise just after burner is lit or shut off.	1. Metal expanding while heating or contracting while cooling.	1. This is common with most heaters. If noise is excessive, contact qualified service person.

TROUBLE-SHOOTING

Continued

⚠ WARNING

If you smell gas

- **Shut off gas supply.**
- **Do not try to light any appliance.**
- **Do not touch any electrical switch; do not use any phone in your building.**
- **Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.**
- **If you cannot reach your gas supplier, call the fire department.**

IMPORTANT: Operating heater where impurities in air exist may create odors. Cleaning supplies, paint, paint remover, cigarette smoke, cements and glues, new carpet or textiles, etc., create fumes. These fumes may mix with combustion air and create odors.

OBSERVED PROBLEM	POSSIBLE CAUSE	REMEDY
Heater produces unwanted odors.	1. Heater burning vapors from paint, hair spray, glues, etc. See *IMPORTANT* statement above 2. Low fuel supply 3. Gas leak. **See Warning statement at top of page.**	1. Ventilate room. Stop using odor causing products while heater is running. 2. Refill supply tank. 3. Locate and correct all leaks (see *Checking Gas Connections*, page 14).
Heater shuts off in use (ODS operates).	1. Not enough fresh air is available. 2. Low line pressure 3. ODS/pilot is partially clogged.	1. Open window and/or door for ventilation. 2. Contact local propane/LP gas company. 3. Clean ODS/pilot (see *Cleaning and Maintenance*, page 20).
Gas odor even when control knob is in OFF position	1. Gas leak. **See Warning statement at top of page.** 2. Control valve defective.	1. Locate and correct all leaks (see *Checking Gas Connections*, page 14). 2. Replace control valve.
Gas odor during combustion	1. Foreign matter between control valve and burner. 2. Gas leak. **See Warning statement at top of page.**	1. Take apart gas tubing and remove foreign matter. 2. Locate and correct all leaks (see *Checking Gas Connections*, page 14).
Moisture/condensation noticed on windows	1. Not enough combustion/ventilation air.	1. Refer to *Air for Combustion and Ventilation* requirements (page 5)

TECHNICAL SERVICE

You may have further questions about installation, operation, or troubleshooting. If so, contact DESA International's Technical Service Department at 1-800-323-5190.

SPECIFICATIONS

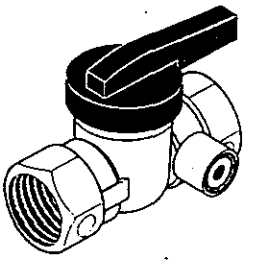
	CGR18PT	CGR30PT
BTU	16,500	27,000
Type Gas	Propane/LP Only	Propane/LP Only
Ignition	Piezo	Piezo
Pressure Regulator Setting	10" W.C.	10" W.C.
Inlet Gas Pressure (in. of water)		
Maximum	14"	14"
Minimum	11"	11"
Dimensions, Inches (H x W x D)		
Heater	24.5 x 20 x 9	24.5 x 27,5 x 9
Carton	25.6 x 21.6 x 10.6	25.6 x 29.5 x 10.6
Weight (pounds)		
Heater	22	30
Shipping	26	34

ACCESSORY

Purchase this heater accessory from your local dealer. If they cannot supply this accessory, either contact your nearest Parts Central or call DESA International's Parts Department at 1-800-972-7879 for referral information. You can also write to the address listed on the back page of this manual.

MANUAL SHUTOFF VALVE - GA5010

Manual shutoff valve with 1/8" NPT tap.



COMFORT GLOW INFRA-RED PLAQUE HEATER PART CENTRALS

BALTIMORE ELECTRIC
1348 Dixwell Avenue
Hamden CT 06514
1-800-397-7553
(203) 248-7553
Parts Department

EAST COST ENERGY PRODUCTS
707 Broadway
W Long Branch NJ 07764
(908) 870-8809
1-800-755-8809
Parts Department

DAYTON HARDWARE
P O Box 275
North Dayton Station
Dayton OH 45404
All States
(513) 258-3721
OH 1-800-762-3426
Parts Department

PORTABLE HEATERS PARTS
342 No County Rd 400 East
Valparaiso IN 46383
All States
(219) 462-7441
1-800-362-6951
Parts Department

MASTER PARTS DISTRIBUTOR
1184 Wilson Ave NW
Grand Rapids MI 49504
US 1-800-446-1446
(616) 791-0505
Fax: 1-616-791-8270
Parts Department

HALCO ENTERPRISES
208 Carter Drive Unit 21
West Chester PA 19382
US 1-800-368-0803
(610) 430-7717
Parts Department

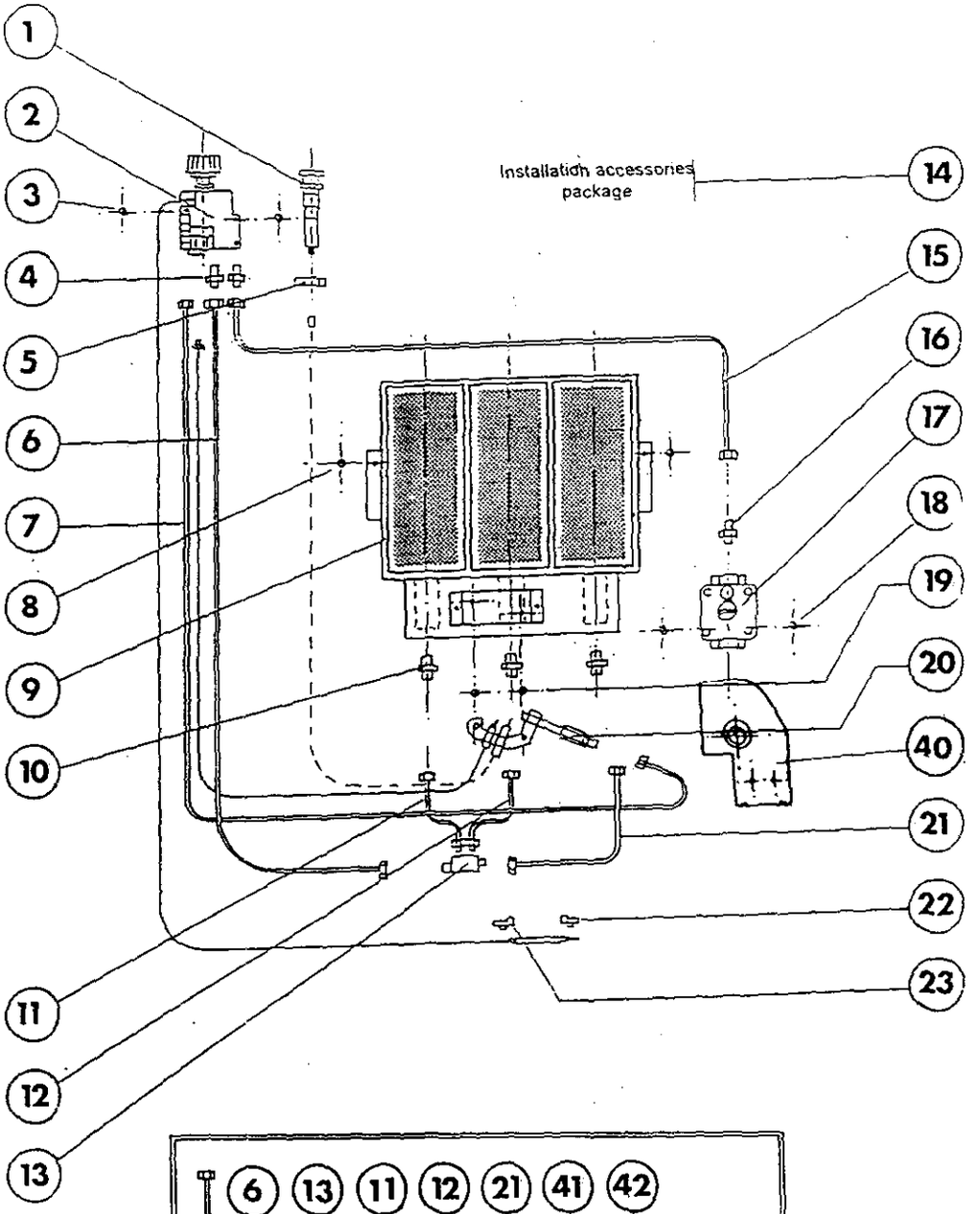
FOUR FLAGS POWER PRODUCTS
1115 Stateline Road
Niles MI 49120
(816) 684-2697
Parts Only

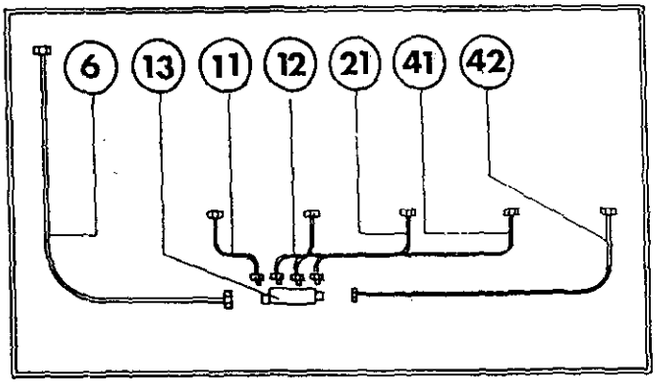
WASHER EQUIP CO
1715 Main Street
Kansas City MO 64108
KS, MO, AR
(816) 842-3911
Parts Department

LAPORTES PARTS & SERVICES
2444 N 5th Street
Hartstville SC 29550
(803) 332-0191
Parts Department

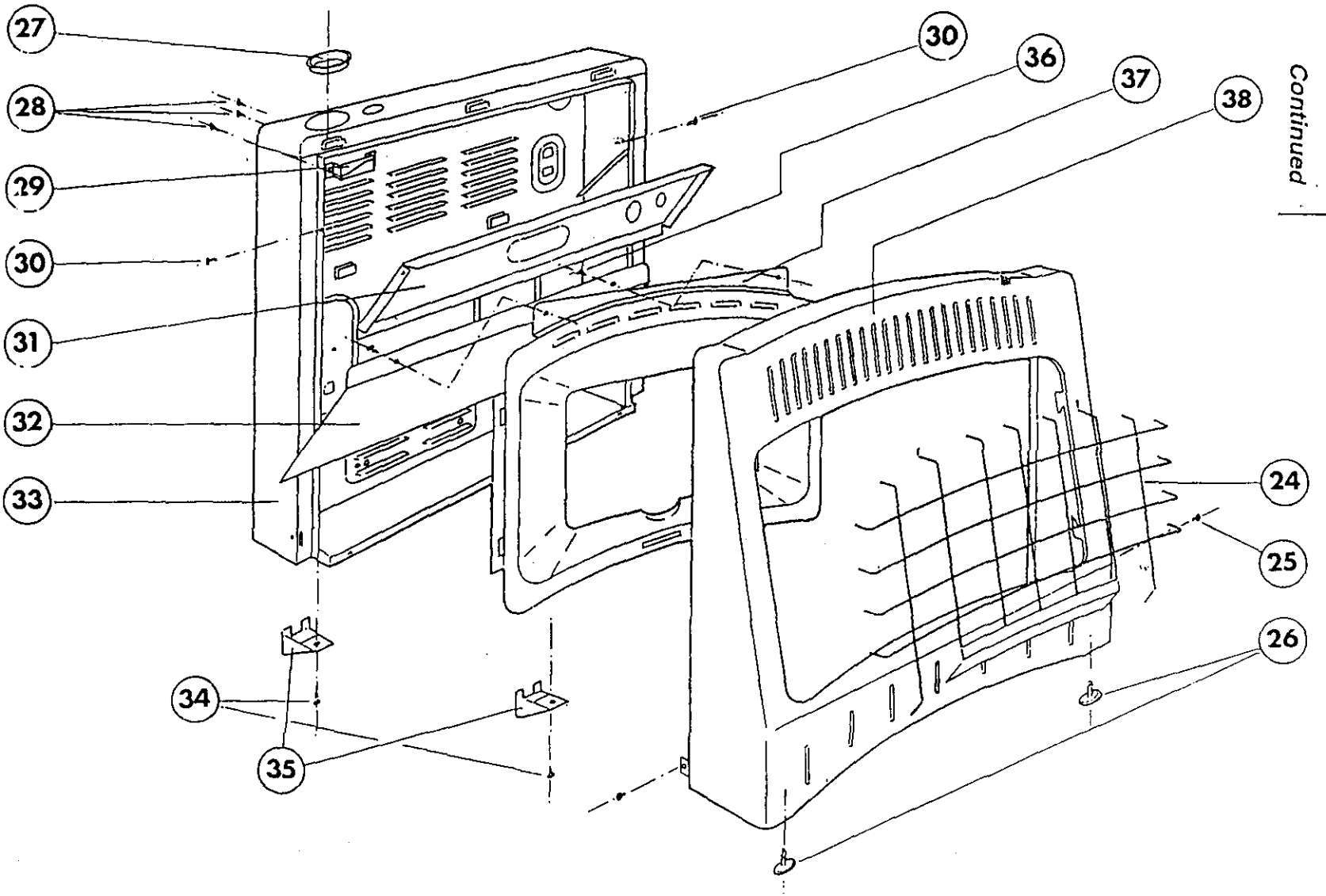
REPAIR PARTS LIST
MODELS CGR18PT AND CGR30PT

DESA INTERNATIONAL
2701 Industrial Drive
P.O. Box 90004
Bowling Green, KY 42102-9004





REPAIR PARTS LIST
MODELS CGR18PT AND CGR30PT
Continued



REPAIR PARTS LIST
MODELS CGR18PT AND CGR30PT

Continued

Note: Use only original replacement parts. This will protect your warranty coverage for parts replaced under warranty.

Parts Under Warranty

Contact authorized dealer from whom you purchased this product. If they are unable to supply original replacement part(s), call DESA International's Technical Service Department at 1-800-323-5190 for information.

When contacting your dealer or DESA International, have ready:

- your name
- your address
- model number of your heater
- how heater was malfunctioning
- type of gas used (propane or natural gas)
- purchase date

Usually, we will ask you to return the defective part to the factory.

Parts Not Under Warranty

Contact authorized dealers of this product. If they can't supply original replacement part(s), either contact your nearest Parts Central (see page 24) or call DESA International Parts Department at 1-800-972-7879 for referral information.

When calling DESA International , have ready

- model number of your heater
- the replacement part number

REPAIR PARTS

INDEX Nº	MODELS		DESCRIPTION
	CGR18PT	CGR30PT	
1	BY 50.000.048	BY 50.000.048	Piezo ignitor
2	BY 83.610.099	BY 83.610.099	Control valve
3	BY 13.310.512	BY 13.310.512	Screw,
4	BY 83.500.385	BY 83.500.385	Fitting
5	BY 13.650.056	BY 13.650.056	Nut M-18
6	BY 83.000.716	BY 83.000.716	Tubing valve - T connector
7	BY 83.000.562	BY 83.000.563	Tubing valve - pilot
8	BY 13.311.592	BY 13.311.592	Screw
9	BY 80.100.057	BY 80.100.058	Burner
10	BY 83.300.338	BY 83.300.338	Orifice
11	BY 83.000.712	BY 83.000.712	Tubing T connector - # 1 setting
12	BY 83.000.713	BY 83.000.713	Tubing T connector - # 2 setting
13	BY 83.500.383	BY 83.500.386	T connector
14	BY 75.300.043	BY 75.300.043	Installation hardware
15	BY 83.000.555	BY 83.000.556	Tubing valve - regulator
16	BY 83.500.385	BY 83.500.385	Regulator inlet - adaptor
17	BY 36.210.046	BY 36.210.046	Regulator
18	BY 13.490.075	BY 13.490.075	Screw M 3,5
19	BY 13.311.592	BY 13.311.592	Screw
20	BY 80.300.034	BY 80.300.034	ODS assembly
21	BY 83.000.554	BY 83.000.557	Tubing T connector - # 3 setting
22	BY 71.100.298	BY 71.100.298	Front bracket
23	BY 71.100.297	BY 71.100.297	Rear bracket
24	BY 74.110.277	BY 74.110.276	Safety guard
25	BY 13.311.542	BY 13.311.542	Screw
26	BY 71.200.163	BY 71.200.163	Frontal leg
27	BY 78.100.421	BY 78.100.421	Trim slide
28	BY 13.311.592	BY 13.311.592	Screw
29	BY 61.001.151	BY 61.001.151	Valve bracket
30	BY 13.310.306	BY 13.310.306	Screw
31	BY 62.200.604	BY 62.200.605	Top heat shield
32	BY 62.200.708	BY 62.200.707	Bottom heat shield
33	BY 62.400.048	BY 62.400.049	Casing
34	BY 13.311.272	BY 13.311.272	Screw
35	BY 71.200.160	BY 71.200.160	Rear leg
36	BY 13.310.306	BY 13.310.306	Screw
37	BY 62.100.526	BY 62.100.525	Frontal reflector
38	BY 64.160.017	BY 64.160.018	Frontal frame
39	BY 22.130.680	BY 22.130.680	Operating and Installation Manual
40	BY 61.000.954	BY 61.000.954	Regulator mounting bracket
41	———	BY 83.000.714	Tubing T connector - # 4 setting
42	———	BY 83.000.715	Tubing T connector - # 5 setting

WARRANTY INFORMATION

KEEP THIS WARRANTY

Model _____

Serial No. _____

Date Purchased _____

Always specify model and serial numbers when communicating with the factory.

We reserve the right to amend these specifications at any time without notice. The only warranty applicable is our standard written warranty. We make no other warranty, expressed or implied.

LIMITED WARRANTY
COMFORT GLOW VENT-FREE PROPANE GAS HEATERS

DESA International warrants this product and any parts thereof, to be free from defects in material and workmanship for one year from the date of first purchase, provided that the product has been properly installed, operated, and maintained in accordance with all applicable instructions. To make a claim under this warranty, the bill of sales or proof of purchase must be presented.

This warranty is extended only to the original retail purchaser. This warranty covers only the cost of parts and an allowance for labor required to restore this heater to proper operating condition. Warranty parts must be obtained through authorized dealers of this product and/or DESA International who will provide original factory replacement parts. Failure to use original factory replacement parts voids this warranty. The heater must be installed by a qualified installer in accordance with all local codes and instructions furnished with the unit.

This warranty does not apply to parts that are not in original condition because of normal wear and tear, or parts that fail or become damaged as a result of misuse, accidents, lack of proper maintenance, alteration, tampering, contaminated fuels, or defects caused by improper installation. Travel, transportation, and incidental costs associated with warranty repairs are not reimbursable under this warranty and are the responsibility of the owner.

To the full extent allowed by the law of the jurisdiction that governs the sale of the product; this express warranty excludes any and all other expressed warranties and limits the duration of any and all implied warranties, including warranties of merchantability and fitness for a particular purpose to one year from the date of first purchase; and DESA International's liability is hereby limited to the purchase price of the product and DESA International shall not be liable for any other damages whatsoever including indirect, incidental, or consequential damages.

Some states do not allow a limitation of how long an implied warranty lasts or an exclusion or limitation of incidental or consequential damages, so the above limitation of implied warranties, or exclusion, or limitation of damages may not apply to you.

This warranty provides the original retail purchaser with specific legal rights. For specific information regarding those rights, please consult the applicable state laws.

For information about this warranty write:

DESA
INTERNATIONAL
2701 Industrial Drive
P.O. Box 90004
Bowling Green, KY 42102-9004